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LETTERS
ON THE
KINE POX,
AND
A VARIETY OF OTHER
MEDICAL SUBJECTS,

WRITTEN BY

DR. B. L. OLIVER, ✓

OF SALEM,

AND

DR. WILLIAM CURRIE, ✓

OF PHILADELPHIA.

1487

“Opinionum commenta delet dies: Naturæ judicia confirmat.”
CICERO.

PHILADELPHIA:

PRINTED BY WILLIAM W. WOODWARD,

Nº. 52, South Second, corner of Chestnut Street.

AT THE

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KINNEBROOK

OF THE

MEDICAL SUBJECTS

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from D. W. M. Currie to his friend
W. W. M. M.
May 13

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MEDICAL LETTERS.

TO DR. B. L. OLIVER.

Philadelphia, November 18th, 1801.

SIR,

MY object in writing to you at present, is to inform you, that various contradictory reports have been circulated here respecting the introduction of the small-pox last year into Salem, and its vicinity; and also that the kine-pox inoculation, employed during the prevalence of the small-pox, did not support in all cases, the credit it has obtained in Great Britain, and other parts of Europe. And, as it is highly interesting to the inhabitants of this country, that the truth should be made public on a subject in which, not only their own welfare, but that of their posterity is deeply concerned, I request you to wave all other considerations, and transmit me with all possible dispatch, all the information that has come to your know-

ledge, or that you can procure on the subject.

The newspapers state that the dysentery has been remarkably prevalent and mortal in Salem and the adjacent country, this season.—With us it has been the reverse; but the intermitting fever has been more general than usual, particularly in the suburbs of the city, and along the flat country, within a certain distance of the muddy shores of our rivers.

Numerous swarms of locusts, which appear in different parts of this country once in 17 years, made us a visit last year: but owing to the luxuriance of vegetation, they did no material damage, except to the tender foliage of the forest, and a few fruit trees. This is a curious phenomenon, and would be a more proper exercise for the ingenuity of Mr. Webster, than wandering through the planetary system in search of the causes of epidemic diseases.

I shall be happy to hear from you as often as convenient, and am with best wishes for your welfare,

Your most Obedient,

and very Humble Servant,

W. C.

Salem, 7th December, 1801.

SIR,

IN answer to your favor, 18th ult. with which I have been honored, I have the pleasure of stating the following:—

Some time about the close of the summer of 1800, Capt. Williams of this place, arrived from England, and had on board some persons that had been inoculated with the cow-pox, (as was supposed). From this source was derived the matter with which many persons in Marblehead, and a few in this town were inoculated. The new disease spread, and soon proved by the most unequivocal signs, that it was the genuine small-pox. This circumstance made a general inoculation necessary in Marblehead. The matter even made some noise in England; and upon investigation, it was found, that a certain Dr. Burrows had inoculated the persons on board Williams' vessel, as well as some others in England, with the variolous, instead of the vaccine matter; (probably through mistake.) Dr. Waterhouse, the professor of medicine at Cambridge, N. England, has paid great attention to the subject; he has caused several that he had inoculated with the cow-pox to be afterwards inoculated for the small-pox; and although they lived with persons that had the latter disease fresh upon them in the hospital, they escaped it.

The same experiment has been repeated at Ipswich, by Drs. Manning and Fisher, who have inoculated many with the vaccine matter, and with a like result. The latter physician, has the fullest confidence in the security which the vaccine disease affords, against taking the small pox. Truth, however, requires, it should be mentioned, that not on all on whom Dr. Aspinwall tried the above experiments, was the same favorable result. A few became infected with the small-pox, but those persons came from a distance, and it was not known by whom they had been inoculated—whether the matter had been genuine vaccine matter—or if the inoculation had properly taken effect. Of course, no great confidence can be placed in the experiment. Some patients, even after having been inoculated by Dr. Waterhouse, did not take the disease. This the Dr. ascribed to the matter having lost its virtue from age. This also occasioned, probably, some failures in Marblehead. But shall we reject the inoculation of the small-pox, because the like effect or disappointment has also resulted, and from the same cause? The physicians here place much confidence in the cow-pox, as a preventative of the small-pox. It seems to be generally thought however, that we are scarcely possessed of all the diagnostic signs, necessary for ascertaining when the system is secured from the small-pox by the vaccine disease. And I am informed, that the like doubts oppress

some in England. A little time will remove the obscurity.—And we know sufficient already, to induce us, first to try a disease which is never fatal, in preference to risking one which is sometimes so, and almost always troublesome and distressing.

I am much obliged to you for your observations on the dysentery. This disease was epidemic here this autumn; but its fatality was mostly confined to children. I have not time now, to write so fully as I could wish—I will make further inquiry, and write the result.

My friend, Mr. Tytler, author of a treatise on the plague, has written a review of Brown's Essay on the Yellow Fever, which gained the prize offered by the Humane Society of Boston. In this very ingenious review, is the best refutation of the doctrine of Professor Mitchill, that I have any where seen. The author also treats of contagion, and refutes the objections which have been made to the doctrines contained in his treatise. The book is about 100 pages, 8vo. If you wish it, I will endeavor to transmit the M. S. for your perusal. I shall be happy to hear from you soon by post, and am, Sir, with great respect and esteem,

Your Obedient Servant,

B. LYNDE OLIVER.

P. S. If you can favor me with any new facts concerning the yellow fever, I shall be much obliged to you. What is the ge-

neral opinion concerning the operation of the quarantine—has it prevented the introduction of the *disease* into your city? Is it ascertained whether the fever of New York this last fall, was the yellow fever, or a species of typhus? We had here three cases of yellow fever, or a disease extremely like it, which terminated fatally in a short time, and which were certainly not imported. I believe with several of the faculty, that we have had two diseases, which much resembled each other, viz. the autumnal or remittent fever, in an aggravated state; and the yellow, or contagious malignant fever: and this, notwithstanding Mr. Webster's opinion to the contrary. As well might he derive the cow-pox from the planet Herschell, as the diseases of America from the eruptions of Vesuvius, and other volcanos. The observations of the Ruffsels and Mertens, are not to be invalidated by vague and uncertain speculations.

“Magna est veritas, et prævalebit.”

Your's, &c.

B. L. O.

TO DR. B. L. OLIVER.

Philadelphia, December 20.

SIR,

I AM exceedingly obliged to you for the satisfactory information contained in your letter of the 7th of December, relative to the introduction of the small-pox into Salem, at the close of the summer of 1800, and am very much pleased to learn, that there was no truth in the reports which have been circulated to the disadvantage of the kine-pox.

Several persons have lately been inoculated with the matter of the kine-pox, both in this city, and in Baltimore; so that there will no longer be any difficulty in procuring matter; and in all probability, the practice will very soon become general.

I should have inoculated with it two years since, having received an infected thread for the purpose, from Dr. George Pearson, of London; but was deterred at that time, by the opinion mentioned by Dr. Jenner, of a person being liable to be infected with the kine-pox more than once, though he was thereby rendered for ever secure against receiving the small-pox. To substitute the small-pox, therefore, on these conditions, appeared to me too much like exchanging a temporary evil, limited

in extent, for one of frequent occurrence, and to which we should be perpetually liable. But the proofs of the superior mildness of the kine-pox, and the great difficulty, and extremely small chance of ever taking it in the natural way, collected and published since that time, by Dr. Ch. Aikin, and the intelligent and benevolent Lettsom, and also the candid and perspicuous, though summary statement of Dr. G. Pearson, in Duncan's annals of medicine, for the year 1800, have removed all my apprehensions; and of course all my objections.

If the observations of the most accurate and respectable European physicians are to be depended upon, we may always be certain that the patient inoculated with kine-pox matter, is rendered secure from ever taking the small-pox, if the following signs appear:

The inoculation being performed in one or both arms, at the option of the operator, in the same manner as the inoculation of the small-pox is performed; at the end of the second or third day, if the operation succeeds, a small reddish coloured pimple or eminence will generally be perceivable in the place of insertion. This increases in size, and becomes hard; and by the sixth day acquires a blueish, or light crimson circle, about half an inch in diameter, with a discoloured speck, pustule, or rather vesicle, filled with lymph and notpus in the centre, somewhat less than a pea.

When this circle or areola progressively increases from the sixth to the eleventh or twelfth day, and then gradually fades, till it is entirely extinguished; and within the same period, a burning or stinging sensation is felt in the inoculated part, and also in the armpit, accompanied with sensations of chilliness, they afford infallible signs, that the matter has taken complete effect, and the system is rendered for ever after incapable of being infected with the small-pox. But if those signs do not arise and proceed in the order described, the patient ought not to be considered or pronounced secure from all future risk.

In general, about the twelfth or thirteenth day, the fluid in the vesicle gradually dries up, and the vesicle itself forms a dark coloured hard scab, which after a few days, falls off.

Sometimes, one or more small vesicles appear on different parts of the body; but in general there is only one solitary pustule, and that appears upon the place of inoculation.

The best time to take the fluid from the vesicle, for inoculating others, is from the sixth, to the tenth day; for it is at that time more active and more certain in producing the desired effect. After the tenth day, the pustule is usually converted into too dry a scab to afford the genuine matter. And great caution should be observed, that no matter be employed from the inoculated part if it should degenerate into an ul-

cer, or even if the matter should continue fluid longer than the tenth day; as such matter has been known to produce a spurious affection, and might be the occasion of a disagreeable deception.

If at the end of four days, no pimple or red spot should appear in the inoculated part, it is a sign it has failed, and the operation should be repeated with fresh matter.

If the skin round the inoculated part should become inflamed, which in some few instances has been the case about the eleventh or twelfth day, and should not disappear spontaneously in a day or two, it may readily be removed by the frequent application of linen compresses, wet with a cold mixture of vinegar of lytharge and water, in the proportion of one part of the former to five parts of the latter, (commonly called lead-water). Emollient poultices are only proper when the intention is to promote suppuration—which is rarely requisite in complaints of the skin.

How simple, easy and intelligible, is the art of inoculating this new disease! It consists only in the knowledge of the genuine matter, (which differs from that of the small-pox, in being more fluid and pellucid;) the proper time of taking the matter, and the management of the local affection, or part inoculated. Those who know this and yet hesitate to adopt it, must be deplorably insensible, or deficient in humanity.

I have lately received a letter from a very ingenious physician in Ireland, Dr. Patterson, who suspects that Mr. Webster's collection on the precursors and causes of diseases, has been anticipated by the author of a book in two vols. entitled, *A general history of the air for 40 centuries*, dedicated to Dr. Mead.

A letter lately printed in England, and addressed to the college of physicians at Philadelphia, by Dr. Haygarth of Bath, (the same Dr. H. who has so ingeniously exposed the fallacy of the metallic tractors) has placed the extraordinary opinions of this eccentric writer in the most ludicrous light imaginable.

This address of Dr. Haygarth, contains so many interesting remarks, that I will endeavor to give you a concise abstract of it.

He tells the college, that 'the clear, consistent' and complete evidence which they have adduced in their pamphlet 'on the origin and nature of the pestilential fever which prevailed in Philadelphia, in the years 1793, 1797, and 1798,' has produced in his mind the fullest conviction, that the contagion was introduced into America from the West-Indies; and adds, that he has deliberately considered all the subsequent publications on this interesting subject which he has been able to procure, without the slightest change of opinion.

"When you made," says Dr. Haygarth, "so plain and useful a discovery, that the

calamity so destructive to the inhabitants of Philadelphia, proceeded from a foreign and imported pestilence, regulations would have been established with one mind, to exterminate the poison, and to guard against the return of a similar calamity. But a physician of eminent abilities, in an evil hour, most unfortunately ascribed the generation of the pestilence with which America was affected in 1793, to putrid coffee, without any proof, or the slightest degree of probability.

To sanction this doctrine, a number of cases have been produced and supported by the strong and respectable testimony of many physicians—at first as individuals, and afterwards as the Academy of Medicine of Philadelphia; but however strong the testimony, and respectable the witnesses, it appears that the Academy have alledged the most frivolous, inadequate, and groundless causes of this calamitous distemper. The bold assertions of the Academy, (says he,) relative to the disease being occasioned by the exhalations of putrefying vegetable substances in the holds of vessels, the damaged state of fruit, pepper, &c. are well adapted to frighten the ignorant, but have a very different effect upon the mind of the intelligent reader.—They are in a high degree improbable.

Some of the medical gentlemen of America, departing from their original opinion, have ascribed its existence to a peculiar temperament or constitution of the atmos-

phere, as proved by the multitude of grasshoppers, flies and moschettoes.

By such vague and ill-founded notions, the measures of government have been obstructed in all the seaports of America.

In an account of quarantine regulations which he had seen, for the port of Boston, he says, all the principal provisions are directed to destroy domestic dirt, and scarce a single regulation to destroy the pestilential poison that might be imported. When speculative errors lead to such dangerous consequences, they highly merit refutation.

When the public mind is unsettled and bewildered by variety of conjectures, the wildest and most improbable hypothesis will be proposed, and will gain some proselytes.

Mr. Webster of Connecticut, who, (he has been informed,) is a man of erudition and abilities, has published two volumes on epidemic and pestilential diseases, in which he ascribes their generation to comets, earthquakes, volcanos, tornadoes, hail-stones, flights of wild pidgeons, large flies, dead haddocks on the coast of Norway, abundance of shad on the American coast, black worms, &c.*

* This is not a correct statement of Mr. Webster's opinion; for he supposes the phenomena enumerated by Dr. H. are all the joint effects of one common cause, in consequence of the influence of a comet deranging the equilibrium of the electric fluid contained in the atmosphere; but he has connected the various phenomena, in such a loose and confused manner, that at first view, they appear as if he intended them to stand in the relation of cause and effect to each other.

The question of cause and effect, is in many instances of disease, difficult to ascertain. In most cases we have nothing to direct our judgment, except the close connexion of place and time. But in Mr. Webster's history, these essential circumstances are wholly overlooked.

In some instances, he makes the effect to precede the cause. Thus he ascribes a high tide in June, 1788, to a comet which appeared the following October, and which could only be seen by means of a telescope.

For the cause of the pestilence which so sorely afflicted America in 1793, he goes back as far as 1788, to collect an account of all the earthquakes in Iceland and in Tuscany; comets, tornadoes, high tides, hail stones, meteors, sickly fish on the banks of Newfoundland, a *halo*, a famine in India and China, dead haddocks on the coast of Norway, &c.

To these causes which happened in distant parts of the world, during a period of five years, he ascribes the American pestilence, though it is more than probable such physical phænomena were not more frequent during that period, than at any other of equal length since the creation of the world.

Dr. Haygarth considers the fact mentioned by Mr. Carey, of all the prisoners in the jail, in the year 1793, excepting two or three, escaping the disease, though there were more than two hundred in confinement at that time, while the surround-

ing inhabitants were constantly falling victims to its ravages, as an incontestible proof that the disease was not owing to any morbid change that had taken place in the atmosphere; and also, that the contagion was not diffused in the atmosphere to any great distance from those laboring under the disease."

Dr. Patterson has acquainted me, that he sent some time ago, a reply to some animadversions of the editors of the New-York Medical Repository, in expectation that they would give him an opportunity of defending himself. In this reply, he says he has attempted to shew some of Dr. Mitchill's mistakes, with respect to the nature of pestilential fluids; but no such reply has yet appeared, and I much question whether those gentlemen will admit any thing into their repository, that has any tendency to diminish the lustre of their own *curious* discovery.

Dr. Patterson remarks, that if Mr. Davy's experiments are to be depended upon, Dr. Mitchill's opinion respecting the nature and causes of pestilential fluids, is completely overturned on chymical principles. In my opinion, it has been more completely overturned by the facts and observations collected and published in one of the newspapers of this city, in the year 1799, by Mr. James Lee, a medical student in the Pennsylvania Hospital—The substance of which is to this effect, viz.

“Nitrous air never exists in the atmosphere, but is converted into nitrous acid, the instant it comes in contact with it. The nitrous acid, moreover, has never been found in the atmosphere in a free state, (though it originates from putrefying animal substances, and a few vegetables of a particular class,) but unites at the time it is generated with other bodies, particularly ammonia.

This truth is acknowledged by Dr. Mitchell himself, though he still believes the nitrous acid in a gaseous state, which he denominates the gaseous oxyd of Septon, is the cause of pestilential diseases. But the nitrous acid, or the acid derived from animal putrefaction, never becomes a gas or permanent elastic fluid, in the hottest climate upon earth; neither does the muriatic acid. To give these two acids a gaseous form, a considerable degree of artificial heat, together with the agency of a third body is absolutely necessary.

But if the nitrous or septic acid could exist in the atmosphere in a gaseous form, it could not maintain its freedom long enough in the cities of the United States, to act as a cause of general disease; because it would be neutralised by other bodies.

The substance for which it has the greatest affinity, is the vegetable alkali—next to this the fossile alkali—then barytes—and afterwards, lime or calcarious earth.

As the first three are not very plenty in cities, lime would be the substance with which it would chiefly unite. Calcareous earth is very abundant in the cities of the United States, as it forms a very considerable part of the buildings. If therefore, any such substance as the nitrous acid in a gaseous state, existed in the atmosphere of cities, it would be known from its effects; for a union would necessarily take place between it and the lime, the result of which would be a salt soluble in water, and very deliquescent; and consequently, the houses would soon fall to pieces. If septic acid existed in the air, metals, instead of being oxyded, or converted into rust, would become nitrates, i. e. they would form neutral salts, by their union with nitrous acid.

The nitrous vapour employed by Dr. Carmichael Smyth, for destroying contagion, agrees precisely in kind, though it differs in degree, with the gaseous oxyd of septon, which Dr. Mitchill supposes to be the cause of pestilential fevers; yet this vapour is breathed for hours together with impunity; and in the experiments of Dr. Beddoes and Mr. Davy, it operated as a cordial, and produced hilarity and vigour, instead of debility and disease.

Dr. Chisholm contends, that the nitric or septic gas, cannot be the cause of intermittents in marshy situations; because, in such situations, the putrefying materials do not afford a sufficient quantity of

septon or azote, to form nitric acid, by uniting with the oxygene of the atmosphere.

And that the pefpirable matter accumulated in the clothing, bedding, and confined situations of the unfortunate poor, affords no fuch gas, is evident from the experiments of the ingenious Mr. Abenethy, who has clearly proved, that the pefpirable matter confifts of carbonic gas, and azotic gas, in the proportion of a little more than two thirds of the former, to lefs than one third of the latter.

It is evident therefore, from thefe confiderations, that the nitrous, nitric, or feptous gas, call it which we please, is not, and from the nature of things, cannot be the caufe of peftilential, or any other kind of fevers.

In compliance with your request, I will now give you a sketch of fome of the moft interefting facts that have lately come to my knowledge. In performing this, I am forry to find myfelf under the difagreeable neceffity of correcting the miftakes of gentlemen, whofe talents I refpect, and whofe literary acquirements do credit to their country.

In the firft number of the fifth volume, for the year 1801, thofe gentlemen have published an abftract of a fupplement to the Madrid Gazette, dated October 28th, 1800, relative to the origin and treatment of the fever at Cadiz, in the fummer and autumn of 1800; which not containing any thing decifive on the fubject of its introduction or caufes, but fimplly an account

of the state of the weather, previous to its occurrence, they have construed into an evidence of its having originated there from local causes; but they had not seen, or have overlooked, facts relative to the source of that disease, published in the Gazette of the same place, of a later date, viz. November 4th, 1800; which are of a very different complexion.

This publication is entitled, "Some particulars relative to the sickness which has depopulated Andalusia." Of which the following is a copy:

"At Cadiz it blew a strong easterly wind, which passing over a burning part of the country, augmented the excessive heat of the summer, whereby the atmosphere was well disposed to receive the sickness—but by no means was the cause of it.

The greatest part of the physicians of Cadiz were wrongfully impressed with this opinion, and therefore applied wrong remedies, which augmented the mortality. On the 8th of August, an American vessel entered the harbour of Cadiz: the log-book of the captain mentions, that during the passage, three men died on board, of the yellow fever. The crew coming on shore, went into the neighboring streets and taverns, and all died of the sickness, excepting the mate.

The fever soon after shewed itself among the inhabitants of the city; and there was not a house into which the infection did not penetrate,


Terror spread on all sides. Many of the inhabitants not knowing that they already had the sickness in their bodies, fled to the Isle de Leon, Chiclara, Port Royal, and Port Santa Maria; from whence they dispersed farther into Xeres, St. Lucar, and Savilla. Not only those emigrants were seized with the disorder; but the same manifested itself pretty soon, among the inhabitants of the said places.

Since the 12th of August, until the first of November, there have died of this sickness, seventy-nine thousand, and five hundred persons; viz. At Cadiz, which contained 68,000 individuals, 16,000.—At Isle de St. Leon, which contained 32,000—8000.—At Port Royal and Chiclara, each of which contained 10,000—3,000.—At Port Santa Maria, which contained 25,000—6000.—At St. Lucar, which contained 18,000—4000.—At Rota, which contained 6,800—1500.—At Savilla, which contained 80,000—32,000.—At Xeres, &c.—11,000.

It was the general belief of the Spanish nation, particularly of the court, that the fever was imported into Cadiz, and consequently was contagious, as is evident from the following notice, published in several newspapers in this country, by order of the prime minister.

Boston, June 29.

NOTICE.

 The fore affliction, occasioned by the yellow fever, in many parts of Spain, during the last summer, particularly in the

Province of Andalusia, which by the bills of mortality, amounted to more than One Hundred and One Thousand persons, having died of that disorder only, his Catholic Majesty's prime minister's orders are to his Majesty's minister plenipotentiary, Consul General, Consuls and Vice Consuls, residing in the United States of America, to take all necessary precautions of manifesting to merchants and others, trading to any port of his said Catholic Majesty's dominions, to be provided with a *Bill of Health* for the respective vessels so trading; and those duly certified by H. C. M. Consul, residing in the district of his appointment, to notify the same in the most public manner. Given under my hand, in office, this 27th day of June, Anno Domini 1801,

JUAN STOUGHTON.
Consul for the Eastern States.

The disease was confined to the above-mentioned nine cities, and did not extend to Estramadura; nor did it appear in any of the cities of the neighboring nations in the same climate; consequently the condition of the atmosphere, could not have given origin to the destructive calamity.

All the commercial towns in the United States, escaped the pestilential fever last year, excepting Norfolk, Baltimore and Providence; the former of which is about

400 miles south, and the last 291 miles N. E. of Philadelphia. It is true, a few sporadic cases appeared in New-York and Philadelphia, and the mortality was in its usual proportion, in the few cases that did occur; but these were so few, as scarcely to create alarm.

The present year, that dreadful scourge has not been observed in any part of the United States, excepting Charleston, Norfolk, and New-York, and in the latter it made but little progress, owing to the lateness of the season, (the middle of September) when it commenced.

These circumstances, in conjunction with those attending the occurrence of the disease in former years, and the fact admitted by all parties, that it has never been observed to make its appearance first in the most marshy and insalubrious situations, remote from the seaport towns, even in the most southerly parts of the country, where it is acknowledged by every one, that the exhalations from putrefying materials, the remote or efficient cause of bilious or remitting fevers, are most abundant, is as strong a proof as can reasonably be required, that the pestilential fever is not derived from the same cause; and, baffles all pretensions to explanation on the principle of an epidemic constitution of the atmosphere; and can only be explained on the doctrine of imported contagion.

If to these be added the testimony collected and lately published in two volumes,

by Dr. Chisholm, of its rise and progress in the West-Indies in the year 1793, several months before it was observed in Philadelphia, every mind open to the impressions of truth, must, as necessary, yield assent to this doctrine, as the balance to the weight.

“That a difference of opinion respecting the contagious nature of this disease, should still exist, not only among the physicians of these states, but among those of the first respectability in the West Indies, is to strangers a subject highly perplexing;” and can only be accounted for from the unfortunate propensity in physicians to theorise, rather than to observe: for, the proofs of its being contagious within the range of a certain temperature in confined and unventilated situations, are so numerous and strong, that it is scarcely possible for any one who has ever had an opportunity of observing the rise and progress of the disease, to doubt it. But “the perverting power of speculative theory, renders all the avenues to truth impervious and abstruse, and the plainest facts, intricate and obscure.”

The great diversity of opinion, respecting the best method of treating the disease, must also be ascribed to the same unfortunate cause. Chisholm's partiality to his favorite discovery, mercury, has perhaps induced him to trust to it exclusively. While the sagacious Jackson has carried his cold bath to the opposite extreme.

There are unquestionably, circumstances in which both remedies are proper, independent of each other; there are others, where their joint powers are more serviceable; and there are others, in which they are both destructive: but the time and manner of employing these remedies to the best effect, can only be determined by one who has added extensive experience to considerable sagacity.

The same remark applies, though in a more limited degree, to blood-letting, in a disease of such a mixed character as the pestilential fever. But enthusiasts seldom reason or reflect.

In the year 1800, it was confidently asserted, that several cases of yellow fever had occurred in the flats of Dorchester county, in Maryland; and these were triumphantly ascribed by some of the adherents to the doctrine of its domestic origin, to the noxious effluvia of marshes. But Dr. Stephenson of Baltimore, has since traced every one of those cases to exposure to contagion in Baltimore, from whence they had removed, or had visited during the prevalence of the fever there. From this circumstance, there is great reason to believe, that the cases which appeared in Misslin county in this state, in the year 1799, were introduced there in a similar manner, by one or more persons who had received the infection in Philadelphia, and communicated it to others. I might here take occasion to give you a de-

tail of facts, in proof of the disease being propagated by contagion, in numerous instances; but to save the trouble of transcribing them, I beg leave to refer you to the proofs exhibited in the pamphlet published in the year 1798, by the College of Physicians of this city, entitled, "Facts and observations on the origin and nature of the pestilential yellow fever, which prevailed in Philadelphia, in the years 1793, '7, and '8, &c." The facts which Dr. Monson, as well as myself, have recorded in proof of the same, may be seen in my different publications on the subject of this fever. These facts afford every degree of certainty on the subject, that can be required by those whose object is certainty, and not controversy.

But the gentlemen who review for the conductors of the Medical Repository, assert, that the great body of the inhabitants of New-York, New-London, Providence and Boston, and they might have added several medical characters in Baltimore, Norfolk and Charleston, believe the yellow fever arises from substances before their eyes, aided by a pestilential state of the atmosphere, and that it is not contagious. If this is their belief, their practice and belief do not correspond; for the great body of the people of those places desert their habitations with fear and trembling, the instant they are assured of its existence among them.

It might have been reasonably supposed, that the death of the fifteen physicians in the city of New-York, in the year 1798, would have convinced those that survived, that the disease was not only malignant, and different from the endemic fever of this climate, but highly contagious under particular circumstances, if they were not under the most extraordinary delusion—A delusion only equalled by that of Don Quixotte, with regard to enchanted castles.

When the plague prevailed in Marseilles, in the year 1720, though the physicians of that place did not, like those reviewers, ascribe the disease to aqua fortis streaming through the air, and seizing on the vitals of the panic struck crowd, they could not comprehend how any person could escape the disease, if contagious. How then would their surprise have been augmented, if they had supposed the poison of putrefaction diffused through the whole atmosphere, and yet numbers in safety rode out the storm?

Some medical gentlemen have even made use of their own escape, as an argument against the contagion of the disease, without taking into account the multitude of their acquaintances, who have fallen victims to it. But if such arguments as these were admitted as conclusive, the same would apply to prove the disease not mortal; because all do not die.

Dr. Hosack, a physician of eminence at New-York, has written to me, that "both yellow fever, and another ship fever existed at the quarantine ground; the one from the West-India islands; the other generated on board the ships lately arrived from Ireland, crowded with passengers." (this was previous to its appearance in New-York.) "To which Dr. Bayley fell a victim, I do not know. The gentlemen who attended him in his illness, call his disease a yellow fever; but as they understand by yellow fever, not only that species which we designate by that name, but a variety of fevers that other physicians consider as a different species, it would puzzle the most acute understanding to comprehend them. This modern system of generalising, may serve the purposes of the mere theoretical physician; but the practical physician, who has experienced the fallacy of hypothesis, renounces them at the bed-side of his patient, as useless nonsense."

The typhus was introduced into Philadelphia by a few individuals, who came passengers in one of the vessels from Ireland, and in a few instances, was communicated to some in the families where they lodged; but it was only propagated to a few, and did not become general. The cases mentioned in the last repository, to have occurred in this city, appear to have been of this kind.

You ask whether it is the general opinion, that the quarantine regulations prevented the introduction of the fever into Philadelphia this year?

Though our quarantine laws are very imperfect, and in some circumstances truly farcical; yet the faithful and rigorous manner in which they were enforced by our health-officers, under the direction of the board of health, are thought to have been the means of preserving the city from the yellow fever this year; and our Governor, whose means of information are the best, and generally correct, in his speech lately delivered to the Legislature of this state, says this exemption, under the favor of Heaven, "may doubtless, in a great degree, be ascribed to the vigilance of the board of health, and of the officers of the lazaretto."

I believe however, there will be no more necessity for quarantine regulations, after the present year, now the war is concluded, and the fleets and armies withdrawn from the tropical climates; for I am convinced, from numerous historical facts, that it is only generated on board crowded ships in hot climates, or during very long voyages.

The measles were imported into New-Castle and Wilmington on the river Delaware, early in the summer of the present year, by some vessels from Ireland, on board of which an extraordinary number of children had died during the voyage.

Soon after the introduction of the disease into those places, it made its appearance in this city; and was first observed in a school at the southern extremity of the city, under the direction of Mrs. Watson, where upwards of twenty of the scholars were attacked with it. These scholars, residing in different parts of the town, communicated it to others, and so on in succession, till it has become general, and is now spreading rapidly in every part of the city, that has not already been subjected to it.

Either the observations of the celebrated Sydenham concerning the rise and progress of the measles, are erroneous, or that disease operated very differently in the climate of England, to what it does in this country.

These are his words. “ Epidemicorum
 “ qui verno tempore grassantur, alii ma-
 “ ture admodum se ingerunt, mense, scili-
 “ cet Januario, et exinde pedetentim, in-
 “ crebrescentes circa equinoctium vernale,
 “ ad statum perveniunt, a quo sensim im-
 “ minuti circa solstitium æstivum evanes-
 “ cunt, nisi quod paucissimæ postea forsi-
 “ tan hunc illumve petant. In horum nu-
 “ mero sunt morbilli; ut et febres tertia-
 “ næ vernaes; quæ, licet serius aliquanto
 “ emergant, Februario nempe, tamen ap-
 “ petente Æstivi Solstitio pariter se sub-
 “ ducunt.”

(*De Morbis Epidemicis, p. 9. edit. 4.*)

When the judgment of this extraordinary man was so egregiously misled by preconceived and groundless theories about epidemic constitutions of the air, (which are mere remnants of astrological imposture,) we ought not to be surprised that science should be disgraced by the equally absurd doctrines of those who have no pretensions to the sagacity and strength of mind of Sydenham. But "*Opinionum commenta delet dies: Naturæ judicia confirmat.*"

If the masters of vessels from Ireland, had followed the example of many of those from the West-Indies, and had denied the existence of the measles on board, some gentlemen that are more accustomed to theorise, than to observe with care and accuracy, would probably have ascribed the appearance of the disease in this city, this year, to an epidemic and morbillous constitution of the atmosphere; and perhaps would have ascribed the absence of the pestilential yellow fever to the superior force of this disease, in taking possession of the atmosphere, and banishing all others from the sphere of its dominion, or compelling them to do homage by wearing its livery. But the facts on this occasion are too clear to give any countenance to such a ridiculous subterfuge.

It is the fashion of the day, not only in the West-India islands, but in this city, to employ mercury in small and repeated doses, for the purpose of inducing saliva-

tion as speedily as possible, not only in the pestilential yellow fever, but in almost all other diseases; not excepting those of an opposite nature. And this novel and hazardous practice is defended on the principle taught by the late Sir John Hunter, that two actions of different force, cannot exist in the human system at the same time. Their object therefore is to disarm the weaker action, by creating a more violent disease in the fauces and gums; that the stronger action thus induced, may destroy the weaker.

If any dependance could be placed in this supposed principle, inflammation excited in any other part of the body, by any other means, would have the same effect; and of course, every variety of fever, even the most inflammatory, might be cured by inflaming the skin by means of cantharides or mustard—by inducing a strangury—by injecting alkohol into the bladder—or tennesmus by means of injections composed of pepper or ginger; for these all induce a stronger topical action than usually takes place in febrile disorders.

Relying on the validity of the same principle, some physicians of eminence in the profession, employ mercury in consumptions; and this in opposition to every rule of analogy, and the experience of ages.

Lest you should think me paradoxical, I will give you chapter and verse for what I have asserted. Dr. Sims says, he has cured persons affected with phthisis, con-

ned with a *venerial affection*, by the use of calomel in small doses; but adds, he had never been so bold as to employ mercury after the lungs had suppurated; but, he had been assured, that a French physician had employed it under such circumstances, with success. (See Sims on epidemical disorders, p. 119.) I suspect the success of that French physician was like that of Dr. J. Barker of Portland, with pot-ash in cancerous ulcers, to render the horrid more horrible!

I have seen numerous instances of patients with the intermittent fever, who have been salivated without any sensible effect, being produced on the fever by it. On the contrary, during the exacerbation of the fever, the flow of saliva was suspended, or greatly diminished, as well as during the chill; but it flowed again during the intermission. The same was observed by Dr. Granger, in the campaign in Flanders, in the year 1747.

This affords a strong argument, that mercury does not remove the disease, when given in the pestilential fever; and that the coming on of salivation, like the sediment in urine, is only a sign that the disease has come to a crisis, which perhaps would have been the case, whether mercury had been given or not. Yet mercury when it acts as a purgative, is in all cases, where inflammatory symptoms predominate, a safe and incomparable medicine.

The action of mercury on the salivary glands, in the eruptive fever of small-pox, instead of suspending, increases the fever, and multiplies the pustules.

In a recent case of measles, salivation, which was induced on another account, had no effect in preventing the eruption; but it increased the fever, aggravated the cough, soreness of the throat, and other inflammatory symptoms, so much as to render several bleedings necessary to reduce it.

In several cases of acute rheumatism, in which I have seen salivation induced, it has invariably aggravated the complaint, and protracted the cure. In cases of phrenitis, after the disease was nearly removed, by depletion and antiphlogistic remedies and regimen, the exhibition of mercury in alterative doses, has renewed the outrageous delirium, and rendered the blood, in the third week of the disease, so solid and tenacious, that it could be suspended upon a probe, and thrown upon the floor without breaking.

This remedy should therefore be confined to its proper department; to humoral diseases, and to that class of disease in which the phlogistic diathesis is deficient.

Many physicians in this country, employ mercury in small and repeated doses, in violent and obstinate cases of the dysentery, for the purpose of inducing salivation. In this way I have seldom observed it to succeed; but have frequently had occasion to observe bad effects produced by it.

In some cases, ulcerations of the tonsils, particularly in children, have degenerated into sphacelus, and occasioned death. But in cases where the symptoms have indicated the retention of indurated and irritating excrements in the colon, after the removal of all appearance of inflammation by venæsection, &c. I have certainly seen most salutary effects produced by giving three or four grains of calomel, combined with one grain of opium, every six or eight hours, and continued for several days. In this manner, the medicine generally promoted free and easy stools; and the disease gradually subsided.

I have found digitalls, when employed agreeably to the directions of Dr. Withering, frequently succeed in dropsy; but by no means more certainly than small doses of squills, combined with calomel, and administered twice a day, till the mouth became affected, occasionally guarded from acting on the bowels, by the addition of opium.

The digitalis, in consequence of the high encomiums it has received in England, has been tried here in a number of cases of consumption of the lungs; but I am not yet prepared to decide on its merits in this disease.

Arsenic, in doses of one fifth, or one sixth of a grain, made into pills with opium, is a favorite remedy in regular intermittents, with many physicians in our

southern states ; but I have been hitherto deterred from employing it in that form, because without due caution, the remedy is more dangerous than the disease. With a weak solution of this substance in water, however, I have been less reserved ; and I am greatly deceived, if I have not frequently succeeded in suspending the disease by its use. This however, is not always easily ascertained, as this disease is liable to be influenced by various circumstances, and particularly by sudden and violent passions of the mind. I have generally administered 20, 30, and in some cases 40 drops, three times a day, in a draught of herb tea, or sweetened water, of a solution prepared in the following simple manner, which I think preferable to that recommended by Dr. Fowler. Mix 12 grains of arsenicum album, in fine powder, with six ounces of rain water, in a florence flask—place the flask in a pot of water, gradually heated, till the water in the flask boils, in which state it is to be continued one hour ; then the water to be passed through filtering paper, (a circumstance which should never be omitted,) and two or three drachms of spirits of lavender compound added to it. If it occasions any uneasy sensation at stomach, it is omitted one day, and the dose lessened when given again. If it disorders the bowels, a few drops of the tincture of opium are added to every dose.

I have lately received a letter from Dr. J. Currie of Liverpool, in which he asserts, that the affusion of cold water upon the bodies of patients laboring under the low typhus fever, if employed during the exacerbation of the fever, and at an early period, is as certain in bringing it to a favorable termination, as the bark is in regular intermittents; but when employed during the chill, it is generally injurious, and often dangerous; as well as after the sweat has begun to flow freely. I would transcribe the particulars of his letter, but mine has run to such an unconscionable length, that I must give you a few days respite. In the mean time shall be pleased to hear from you, and am

Your's respectfully,

W. C.

TO THE

NEW-YORK

MEDICAL REVIEWERS.

GUARDIANS OF WISDOM !

MY object in addressing you at present, is not to plead for mercy upon the preceding letters, nor to glut you with flattery for the purpose of preventing you from devouring them, "like carrion crows eat a dead horse"—but humbly to enquire by what authority you have taken possession of the exalted seats of science, and constituted yourselves supreme judges of the works of others; and at the same time to remind you, (for you appear to have forgot,) that they who assume the arduous and important office of criticism, or "boldly bestride the world of learning, and ride with proud dominion, upon the backs of crouching authors," before they have acquired that maturity of judgment which results from long and extensive experience, and that weight of character which results

from consistency of conduct, are justly considered vain and arrogant pretenders.

But you, no doubt, have given proofs of your title to this high and distinguished privilege, though no such proofs have come to my knowledge.

It is true you do not, like the London reviewers, with studied care conceal your names ; but give weight to your opinions and discussions, by exposing your *nakedness* to the world's broad eye.

We are told by Peter Pindar, of humorous memory, that those skulking fellows,

“ Like murderers in their dens,
In private meet, in cellars deep or garrets high,
With hatchets, scalping knives in shape of pens,
To bid, like Mohawks, hapless authors die.
In whose reviews are together slung,
The limbs of butcher'd authors, cheek by jowl,
Like legs of flies, on cobwebs hung
Before the spider's dreary hole.

Frightful as chimney sweeps, or hideous blacks
In greasy flannel caps, they meet together,
With scarce a rag of shirt upon their backs,
Or coat, or breeches, to keep out the weather.
Yet these dark and skulking fellows, bestride
The world of learning, and with proud dominion,
High on the backs of crouching authors ride,
And rule the world with a mere dictum.
Of vulgar wit, and manners coarse,
They devour all but those who temporise,
As carrion crows eat a dead horse.
But the absurdest stuff, their own members write,
Besure is excellent ; a partial crew !
With I. O. Peans, ushered to the light
And prais'd to folly in their next review.”

But this does not apply to you, gentlemen ; you are above such low, unmanly

arts. You have more honesty, or less modesty; and instead of meeting in cellars, or in garrets, you pronounce your awful sentences in colleges and in halls.

Some of your singular notions, however, have been long suspected of being the chimeras of a distempered brain, by all who have paid strict attention to the effects which result from

“ The putrid thaw
Of nature, when from shape and texture,
She relapses into fighting elements.”

and have lately been refuted and subverted by a medical student of this city; and your hobby horse which you call gaseous oxyd, and which you thought so sure footed, is fallen into a ditch, and is become the sport of boys.

If my information is correct, your experience in diseases has been extremely limited, and consequently your practical knowledge is very deficient; of course your opinions are not to be received as oracles.

On the subject of contagion, you appear to have mistaken the spectres of your own imaginations, for realities; and have with *great and becoming humility*, treated the facts and observations of the most enlightened physicians of the age, as fables, idle visions, and nullities.

To suppose, as you do, that the typhus is the effect of putrefying animal excretions in the winter season, is to give a local habitation and a name, to the spectres of a maniac's brain.

Read Poissonier's memorable account (or Lind's extract from it,) of the fever which prevailed in Brest in the winter of the year 1758, and learn that the cause of the typhus fever is a contagious substance which issues directly from the bodies of the diseased, and is not the effect of putrefying animal excretions.

“ A fleet under the command of Admiral Dubois de Lamotte, was joined in the harbour of Brest, early in the spring of 1757, by two ships of the line, the Glorieux, and the Duc de Burgoigne, both of which had received on board, some men from the hospital at Rochfort. During their stay at Brest, the contagion was so rapid, that they were obliged to send 400 of their sick on shore.

On the 3d of May, the fleet sailed from Brest to Louisbourg. During its passage to, and stay in that port, the fever became general, and was attended with a considerable mortality.

On the 20th of October, the fleet sailed from Louisbourg, taking on board the sick, but leaving almost 400 in a dying condition.

At sea, the contagion acquired fresh vigour. In a very short time, the whole squadron was disabled; and on their arrival at Brest, on the 22d of November, the few remaining seamen were scarcely sufficient to navigate the ships, having no less than four thousand men ill. All their surgeons and almoners were either sick or

dead ; and when they arrived, seamen were immediately sent on board, to bring them to anchor, and surgeons to assist the sick. Unfortunately, 4000 more arrived at the same time from Quebec, in the Bizarre and Celebre, two ships of war, into which the disease was communicated by the above squadron. During the general confusion, they had been promiscuously crowded into the town of Brest, wherever they could get admission.

Fifteen hospitals were at last fitted up, which were soon crowded ; and the mortality spread among the inhabitants. Five physicians, 150 surgeons, and 200 almoners and nurses, fell victims to the fever, as well as a great number of slaves, who had undertaken to nurse the sick for the reward of freedom. From the attendants, the fever was communicated to the lower classes of the people, and spread among them rapidly. The mortality then became general, and the houses were filled with the dying and the dead. At length, in the month of April, the contagion gradually lost its power, and the disease soon after ceased entirely, after having swept off, in less than five months, (and those in the coldest season of the year,) 10,000 persons in the hospitals alone ; besides the inhabitants of the town, which could not be numbered."

In the year 1778, a similar occurrence, but on a much smaller scale, came under my own observation, at the quarters of

General Sterling, at the camp near the Valley Forge, in consequence of receiving a negro man, a convalescent from one of the hospitals, into his family, though the weather at that time was so cold, as to freeze water at the bed-side of the patient every night ; and although the utmost caution was observed, by daily changing the body and bed linen, and the frequent *admission* of fresh air into the apartments where the sick lay, several persons belonging to families in the neighborhood, who, from motives of humanity, sat up all night with the sick, were soon after affected with the same disease ; and some of them died. They all had *subfultus tendinum*, and great prostration of strength soon after confinement. Those that died, were as yellow as a person with an incipient jaundice, particularly about the eyes, neck, and breast ; and their chests and limbs were generally chequered with purple spots.

In these cases, the disease was evidently propagated from one to another by contagion, or effluvia of a specific kind, which issued immediately from the bodies of the sick, and not by exhalations from putrefying animal excretions, or other "naughtiness," (as you take delight in calling the effluvia from the living animal body.) For it was impossible for such excretions to putrefy in such a temperature of the air, if any such had accumulated.

To deny the existence of contagion, therefore, in cases of typhus fever, is to

betray the most consummate ignorance, want of experience, or great self-sufficiency.

For proofs that the pestilential yellow fever is also contagious, and is a disease peculiar to ships, and originates from a combination of circumstances which never exist to the same degree in any other situations, I need only refer to the facts contained in the works of Labat, a catholic missionary, who resided at Martinico soon after the introduction of the disease into that island, by a French ship crowded with passengers, from the deserted settlement of Merguy and Bancock in Siam; an extract from which may be seen in Dr. Chisholm's second edition, vol. 2d, p. 108. to Desporte's diseases of St. Domingo; Ulloa's voyage to South America, vol. 1st, p. 170; Rouppe's diseases of seamen, p. 71 and 416, and to Chisholm's last edition in two volumes, on the origin of the pestilential fever introduced into the Island of Grenada, by the ship Hankey, from Africa, in February, 1793, several months before it made its appearance in Philadelphia.

But, Gentlemen, you have made a public declaration, that a pestilential constitution of the atmosphere has existed for some years; and your friend Noah Webster, Esq. has given us the *comfortable assurance*, that this pestilential constitution not only still exists, but that it has not yet attained to its height. You will therefore confer an immense favor upon your panic struck

countrymen, if you will be so condescending as to disclose the means by which you have made this *hopeful* discovery.

You who have traced, and still daily trace the ample circle of science; and whose mental eye, like the poet's, "in fine phrenzy rolling," has pierced through the thickest mists of error, and given a local habitation and a name, to the spectres of the viewless air, certainly would not have hazarded a declaration of such serious import, if you had not analysed the huge atmosphere, and discovered how far its constituent principles, its azotic, and its oxygenous parts have deviated from their usual salutary proportions; or what kind of noxious and deleterious materials it has received and retained, from yawning cavern, or portentous comet.

Fruits have ripened early, and decayed rapidly, horses and cats have died, turkies have drooped, and *geese* have gabbled in former ages, when no pestilential fever spread desolation and terror through the land, as well as during its prevalence.

Asses and owls also, have themselves betray'd,
When these have whooted, or those have bray'd.

And it is a maxim, which even you will not dispute, that "the efficient cause of an effect must not be occasionally, but constantly present, whenever that effect is produced."

Insects and reptiles have always been more or less numerous, according as the

seasons have been more or less wet or dry, cool or warm, changeable or constant, &c.

When the syphilis was first observed in Europe, (which was in the year 1494, soon after the return of Columbus's Squadron from the island of St. Domingo,) though it was universally agreed, that it was a new and extraordinary disease, and different from any other with which they were acquainted; yet physicians of the greatest eminence differed widely in their opinions respecting its origin, or the causes by which it was produced.

Some of the most early writers on the disease, misled by the superstition of the age, adopted the idle, fanciful and unsupported notions of the astrologers, and attributed this loathsome malady to an unfavorable influence of the stars, or the baneful effects of the conjunction of discordant planets: but as the votaries of error are seldom consistent, they disagreed among themselves—Some assigning as its cause, the conjunction, and some the opposition, of the same planets.

Others, however, rejecting preternatural and unintelligible causes, attempted to account for its occurrence from a variety of circumstances, which their misled and credulous understandings conjured into rare and extraordinary phenomena in the physical world, which had no relation to it, but were mere common occurrences or coincidents, that had long, perhaps al-

ways existed, but had not been before so particularly noticed.

Some even ascribed it to an intemperature of the air, occasioned by the overflowing of rivers from an extraordinary fall of rain, which happened about the time of its appearance. And its appearance in Italy was ascribed to the overflowing of the Tiber.

All those opinions, however, sunk into merited contempt, so soon as it was ascertained by accurate and respectable observers, that the disease attacked those only who had communication with the infected. (See Astruc, vol. 1. p. 66.)

And such I may venture to predict, will finally be the case with respect to the pestilential yellow fever, however it may for a time be retarded and rendered equivocal by the arts of sophistry, and the zeal of mistaken enthusiasts. For, "*Opinionum commenta delet dies : naturæ judicia confirmat.*"

If therefore, you have nothing to offer in support of your opinion, but arbitrary assertions, vague conjectures, and remote analogies, when demonstration is required, I hope you will abandon your untenable ground, like men of principle, and shew that truth and not controversy, is the object of your researches; and by so doing, you will escape the derision, and what is more humiliating, the pity of all who are acquainted with the true rules of philosophising established by the judicious Verulam.

I do not suspect, you would knowingly injure the credit or interest of your country, by your speculations; because I believe you to be Gentlemen, but unfortunately misled on the subject of fevers, by the false light of falacious theory; and nothing but the love of truth, and a desire of rousing you to reconsider the dangerous consequences of supporting erroneous opinions, should have drawn language which wears the aspect of asperity from your
 very Humble Servant, &c.

P. S. An opinion has been delivered by an eminent professional gentleman, that the concurrence of the three following circumstances is essentially necessary for the production of a pestilential yellow fever, viz.

1st. Putrid exhalations.

2d. An inflammatory constitution of the atmosphere.—And

3d. An exciting cause; such as, great heat—cold—fatigue—intemperance in eating or drinking—ice creams—indigestible aliment—or a violent emotion of the mind.

With respect to the first and last of these causes, it cannot be denied that they existed in Philadelphia in an equal, and the first in a much greater degree, than since the year 1793; particularly the year that the British troops had possession of the city, and the year after they retreated from it.

And the notion relative to a depraved and unsalutary change having taken place

in the constitution of the atmosphere, is disproved, or at least is rendered highly problematical, by the circumstance of the pestilential fever not having occurred every year since the unsalutary change is supposed to have taken place; but at irregular periods, ceasing from the end of 1793, till the summer of 1797; then returning, and recurring three years successively.

And that no such unsalutary change has taken place, is proved to demonstration, by a comparison of the bills of mortality of those years that the city has been exempt from the pestilential fever, since the pretended unsalutary change took place, with those preceding that period.

While London, Paris, Vienna, and other populous cities in Europe, are indebted to an influx of strangers, to keep up the number of their inhabitants, our bills of mortality and registers of births, furnish incontestible evidence, that in the intermediate years, from 1793 to 1797, the number of births on an average, was more than double the number of deaths; and the bills for 1800 and 1801, afford the same proofs.

A comparison of these bills also with those of former periods, before the streets were so extensively paved, the ponds drained and filled up, and the great foul and offensive dock (which extends a considerable way towards the central part of the city,) was arched over, and its muddy surface excluded from the rays of the sun,

afford the most convincing proofs that the city has greatly improved in salubrity, as well as in population and opulence.

Mr. Kalm, a very respectable Swedish naturalist, who travelled through a considerable part of this country, has recorded, that in the years 1742, '3, '4, and '5, the annual number of deaths exceeded 400; and that in each of the years 1749 and 1750, it exceeded 700, though it does not appear that there was any contagious disease prevalent at that time, and the number of inhabitants did not exceed 12,000. Whereas last year, when the number of inhabitants exceeded 70,000, the number of deaths did not much exceed 1400, as may be seen in the printed bills, as collected and published by the Clerks and Sextons of Christ's and St. Peter's churches. A stronger proof of improvement in the salubrity of a place cannot be given; and I much question whether any other city on the face of the globe, equally populous, can be found equally heathful with Philadelphia.

No syllogism can refute the multiplication table. When therefore people complain of the insalubrity of the climate and situation of Philadelphia, instead of appealing to the serenity of the sky, the cleanliness of our streets, the absence of stagnant water, and "heaps of unmolested putrefying animal and vegetable substances," (none of which, excepting now and

then a dead cat, ever offends the eye of the observing traveller,) or to the hale countenances of our citizens of every description, we have only to refer them to our bills of mortality, contrasted with those of other countries, to convince them of their error.

PHILADELPHIA, }
Jan. 11th, 1802. }

F I N I S.

ADVERTISEMENT.

THE author of the Historical Account of the Climate and Diseases of the United States, is preparing a Second Edition for the press, and solicits communications from every Medical Gentleman that has paid attention to those subjects.

